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ABSTRACT

The purpose of this study was to discover if there were differences in student attitude and achievement toward and in the subject matter between students taught in an open space and in a closed space. Two classes in U.S. history taught in 11th grade were compared. The same instructor taught both classes using identical methods, procedures, and materials. The teacher, in both her own self-concept and also in the views of her fellow teachers and school administrators, demonstrated those characteristics often quoted as characterizing the open classroom--people-centered, idea-centered, experience-centered, and problem-oriented. During the first week of the quarter, the social studies attitude pretest "A Scale to Measure Attitude Toward any School Subject," Form A and part of the "Purdue Master Attitude" were given to both groups. Also, the midterm test accompanying the text used in the teaching of the course, "The Rise of the American Nation" by Lewis Todd and Merle Curti, was given as a pretest of subject matter knowledge. The findings of the study showed that the type of classroom, open space or the traditional closed space, made no significant difference in students' attitude toward social studies or the amount of subject matter knowledge gained by students. However, if one considers the fact that both groups gained in their attitude toward social studies and if the teacher who taught both sections is truly an open classroom teacher, then the open classroom teacher may make a difference in students' attitude toward learning. Probably the individual teacher is more important in any learning situation than is the physical classroom setting.
(Author/RM)

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# A COMPARISON OF OPEN SPACE AND CLOSED SPACE CLASSROOMS IN SOCIAL STUDIES INSTRUCTION

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## INTRODUCTION

In the past decade many schools have attempted to implement the open classroom concept. The open classroom has been characterized as "person-centered, idea-centered, experience-centered, problem-oriented . . . ." (Nyquist, and Hawes, 1972, p. 84). When schools have attempted to implement the open classroom concept with an open space concept, pupils and teachers have been placed into a physical classroom atmosphere which is quite different from the traditional closed space classroom setting. For various reasons, groups such as parents, students, teachers or school board members have expressed dissatisfactions with the open space concept.

Although many studies defend the open classroom concept, there is relatively little research data on actual successes of open space classrooms as such. This is particularly true for the secondary schools.

Results from studies favoring the open space classroom concept give interesting insights into the concept. Bleier and his colleagues (1972) believed open space classrooms fostered independence and developed positive self-concepts. They tested two third grade classes, one the traditional closed and one the open space. They concluded that the significant difference favored the open space classroom group. Traditional

or closed space classroom children were likely to choose the suggested answer more often than the open space classroom children. The open space classroom pupils trusted their own answers more often. McLoughlin's comparative study (1970) of the open space and the traditional closed space classrooms reported no significant difference in scores on the Metropolitan Achievement Test or the Pupil Portraits. However, there were fewer pupil retentions in the open space classroom children. Purkey (1970) observed 939 Florida children in these two types of classrooms. Children in both the open space and the closed space classrooms took the Coopersmith Self-Esteem Inventory. The significant different in self-esteem results favored the open space classroom children. Also, Cohen (1973) found, in comparing open space and conventional space elementary schools, greater job satisfaction among teachers in open space schools than in closed space schools.

Not all of the literature suggests that educators have viewed the open space school as a panacea for the ills of education. Carl Anderson (Education Digest, 1970, p. 9.), concluded that only primary school children and high school seniors should be in open space schools. Primary school students would function better in a less structured setting and high school seniors would be mature enough to be more self-directed. Seefeldt (1973) believed that open space could negate the very freedom that it was designed to foster by focusing on learning stations that emphasize dittoed work pages, workbooks, prepared learning kits and programmed materials. He believed these trapped the student into a program of artifical learning that was too fragmented and not really "active" activities. Hoyle (1974) found that teachers favored open space classes more if they were in smaller schools of less than 500 students, second best in medium sized schools and least in large schools with over 1,000 students.

In order to discover if there were differences in student attitude toward the subject matter and student achievement in the subject matter between sudents taught in an open space area and a closed space area, the following study was conducted. The same teacher taught both the class in the open space area and the class in the closed space area. The teacher, in both her own self concept and also in the views of her fellow teachers and school administrators, demonstrated those characteristics quoted by Nyquist and Hawes as characterizing the open classroom--person-centered, idea-centered, experience-centered and problem-oriented. Both settings could be characterized as being open classroom. The only difference was the actual space setting.

## Research Design

The study was conducted by comparing two classes in United States history taught on the eleventh grade level at Southeast Whitfield High School, Dalton, Georgia, during the fall quarter of 1979. Whitfield County is in the upper northwestern section of Georgia and has a population of approximately 72,000 persons. Southeast Whitfield High School is one of three comprehensive high schools in the county. The majority of Southeast Whitfield students came from lower middle class homes. Approximately 70 percent of the students' parents worked in the carpet industry. The school was 98 percent white.

Of nine possible sections of United States history classes, two classes were chosen for the study. The two groups were both heterogeneous. The A period or experimental group had 30 students (11 females, 19 males) and the B period or control group had 28 students (13 females, 15 males). The A period class (Group 2) met in the closed space classroom, and the B period class (Group 1) met in the open space classroom. The two classes rotated from day to day during the morning periods, meeting four times a week each according to the following schedule:

| | Day of the Week | | | | |
|---|---|---|---|---|---|
| | M | T | W | Th | F |
| Class | A | D | C | B | A |
| | B | A | D | C | B |
| | C | B | A | D | C |
| | D | E | E | E | E |
| | E | F | F | F | F |
| | F | | | | |

The class periods averaged 55 to 65 minutes in length. The time length depended on whether the class met during the first, second or third period of the day.

The closed space classroom had two concrete block walls and two fiber-

board walls which ran from the floor to the ceiling. These four walls separated it from other classrooms. No visual or verbal contact could be made between this classroom and other classrooms.

The open space classroom was an open area which could facilitate four classrooms. However, only two classes were conducted in the area during the time of this study, the United States history class and a civics class taught by another instructor. The two classes were separated only by a few book cases which were approximately three feet high. These two classes were separated from two other classes by an eight foot high fiberboard partition which ran the length of the entire area. There was much more noise and visual distraction coming from other classes in the open space area than in the closed space area.

During the first week of the quarter, the social studies attitude pretest, "A Scale to Measure Attitude Toward any School Subject," Form A, developed by H. H. Remmers and part of the Purdue Master Attitude was given to both groups. Also the midterm test accompanying the text used in the teaching of the course, The Rise of the American Nation by Lewis Todd and Merle Curti, was given as a pretest of subject matter knowledge. Students were not aware that they were involved in a research study, as pretesting and posttesting are standard procedures in the Southeast Whitfield High School Social Studies Department. The students were not told their scores. On the last week of the twelve-week quarter, on the same day, the same tests were repeated for Social Studies attitude and subject matter knowledge as posttests.

The instructor taught both classes using identical methods, procedures and materials. Both classes covered the entire nineteen chapters of the texts. A variety of instructional methods were used which included lecture, class discussion and reports, group work, audio-visual aids and a guest speaker.

The analysis of covariance procedure was used to test for differences in mean gains in students' knowledge of United States history and to test for differences in mean gains in students' attitude toward social studies.

The A period class or closed space classroom was designated Group 2, or the experimental group, and the B period or open space classroom was designated Group 1, or the control group. Table I gives the mean pretest scores and the mean posttest scores for subject matter knowledge for both groups:

Table I

Pretest and Posttest Mean Scores on Subject Knowledge

| | CONTROL GROUP | | EXPERIMENTAL GROUP | |
|---|---|---|---|---|
| | Pretest | Posttest | Pretest | Posttest |
| Mean | 35.85 | 43.46 | 33.70 | 42.60 |

To determine if there was a significant difference in the mean gain knowledge scores of the two groups, an analysis of covariance was computed using the posttest as the dependent variable, the pretest as the covariant and the group as the independent variable. This information is given in Table II:

Table II

Analysis of Variance

| Source of Variation | Sum of Squares | DF | Mean Square | F | Significance of F |
|---|---|---|---|---|---|
| Covariates Pre-Knowledge | 1413.031 | 1 | 1413.031 | 20.924 | .001 |
| Main Effects Group | 2.603 | 1 | 2.603 | .039 | .845 |
| Residual | 3714.298 | 55 | 67.533 | | |

The F value for the group variable was not significant at the .05 level. No significant difference was found between the mean gain scores on subject matter knowledge of the two groups.

Table II gives the mean pretest scores and the mean posttest scores for both groups in regard to attitude toward social studies:

Table III

Pretest and Posttest Mean Scores on Attitude

| | CONTROL GROUP | | EXPERIMENTAI GROUP | |
|---|---|---|---|---|
| | Pretest | Posttest | Pretest | Posttest |
| Mean | 35.85 | 43.46 | 33.70 | 42.60 |

To determine if there was a significant difference in the mean gain scores of the two groups in relationship to attitude toward social studies, an analysis of covariance was computed using the posttest as the dependent variable, the pretest as the covariant and the group as the independent variable. This information is given in Table IV:

Table IV

Analysis of Variance

| Source of Variation | Sum of Squares | DF | Mean Square | F | Significance of F |
|---|---|---|---|---|---|
| Covariates Pre-Attitude | 152.223 | 1 | 152.223 | 157.381 | .001 |
| Main Effects Group | .056 | 1 | .056 | .058 | .811 |
| Residual | 53.197 | 55 | .967 | | |

The F value for the group variable was not significant at the .05 level. There was no significant difference in the mean gain scores according to attitude toward social studies of the two groups.

## Conclusions

From the results of this study it can be concluded that the type of classroom, open space or the traditional closed space, made no significant difference in students' attitude toward social studies or the amount of subject matter knowledge gained by students.

However, if one considers the fact that both groups gained in their attitude toward social studies and if the teacher who taught both sections is truly an open classroom teacher -- person-centered, idea-centered, experience-centered and problem oriented -- then the open classroom teacher may make a difference in students' attitude toward learning. Probably the individual teacher is more important in any learning situation than is the physical classroom setting. A further study should be conducted to determine if there is a difference in attitude toward subject matter and/or subject matter knowledge gained between a teacher who exhibits the student oriented (open) philosophy versus the teacher who exhibits the teacher oriented or subject matter oriented philosophy.

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